

IMPROVED INFORMATION MANAGEMENT THROUGH A CENTRALISED WORK-INTEGRATED LEARNING UNIT

ABSTRACT

Within Higher Education Institutions there are various qualifications that are unique and diverse leading to different approaches to work-integrated learning. To identify and research the information management for work-integrated learning models in place at specific universities well known for their work-integrated learning programmes, two international universities in the United States of America were identified as they had been developing and implementing work-integrated learning programmes for some time. These two universities were consulted and research was conducted to identify best practice benchmarks for information management for a work-integrated learning feedback system. In future, a similar system could also be rolled out in a South African Higher Education Institution, namely the University of Johannesburg. On engaging research with all the relevant and appropriate departments within the University of Johannesburg an analysis was done of work-integrated learning related practices and processes which were in place and used by these departments. However when taking a closer look several gaps and areas of concern were identified. This article highlights that the information management of work-integrated learning can be improved through a centralised work-integrated learning unit.

Keywords:

Work-integrated learning, Information Management, Higher Education Institutions, Centralised work-integrated learning unit

1. INTRODUCTION

Work-Integrated Learning (WIL) is critical in empowering students to be aware of what is expected of them in the workplace and allows them the opportunity to experience real work environments. According to Martin and Huges (2009, p. 8), the WIL experience provides a bridge for students between the academic present and their professional future and is an opportunity for students to apply and merge theoretical knowledge gained in academic studies to “real world” work place practical experiences. The key purpose of WIL is the concept of providing graduates with a comprehensive skill-set desired by potential employers. WIL is a process that needs to work well and this process needs to be based on well-developed information management (IM) principles, where each of the parties involved in WIL has a unique and critical role to play in delivering effective and competent graduates to the specific work circumstance. According to Spowart (2006, p. 11) Higher Education Institutions (HEIs) are under increasing pressure to prepare their graduates for the world of work, stressing the need for including a WIL component to the qualification.

Some qualifications at HEIs internationally incorporate a strong WIL component; the IM for WIL frameworks have been developed over long periods of time. Specific universities are acknowledged for the work done on these IM for WIL frameworks and are used as benchmarks of best practices which can be used to guide other HEIs to develop their own IM for WIL frameworks. Two universities based in the United States of America (USA), who are well known for their established WIL programmes, were used in this study as benchmarks to compare the WIL programme of a South African university, namely the University of Johannesburg (UJ) (Brink, Mearns and du Plessis; 2014). Often a lack of structure regarding WIL across departmental silos result in different processes being followed for the WIL component, considering that departmental requirements differ. Also, various faculties offer

different learning options which involve unique and diverse processes, which justify the different WIL processes. This is especially the case for the management of information in each faculty as it varies pertaining to their WIL programme.

Managing information aims to ensure that information of lasting relevance is recorded and placed in a well-structured organisational archive. A lack of structure for IM can impact negatively on the optimal utilisation of the administration of the WIL process. After investigating the IM for WIL practice of two international universities this article argues the need for a well-developed centralised WIL unit. A framework guiding a centralised WIL model needs to be analysed in order to determine the applicability of a centralised unit, such framework then needs to be re-evaluated in terms of the deployability of this feedback system at UJ to put in place a more effective IM for WIL model. This article will also highlight the complexity of the current WIL process, and the challenges the UJ experience in terms of feedback. According to Cates and Cedercreutz (2008, p. 28) a feedback process will allow the parties involved in WIL an efficient allocation of educational resources to be aware and informed of the effectivity of the educational system. In order to establish an effective feedback process, the information that currently is shared and that potentially could be exchanged between the three parties of WIL, namely HEI, the industry partner and the student, need to be managed. The argument of this article is grounded in the following research question: **How can a centralised WIL unit be beneficial for more effective information management?**

This article aims to provide insight for UJ and other HEIs on ways to develop and put in place a centralised WIL unit guided by a well-structured IM process. This process works as a centralised solution based on an online feedback system which will allow online information

transactions of all parties involved in the WIL process and hereby ensure an improved system for WIL. This system will be effective only if the core areas of IM are incorporated.

2. CORE AREAS OF INFORMATION MANAGEMENT

Management of information has various core areas which require multiple interventions at different levels of management. One of the core areas of IM for WIL is personal information management (PIM). PIM is the management of information in the every-day lives of individuals, how information is accessed that is needed to address business and personal needs. For example on a personal level the student, in order to prepare a CV or prepare for an interview, has a need for information and will search for such information using a variety of information sources. In the WIL programme this process is typical of PIM and is not the same as organisational information management (OIM).

OIM is considered as a separate core area of IM for WIL. Hicks, Culley and McMahon (2006) define IM from an organisational perspective, saying that it includes activities that support the information lifecycle from creation, representation and maintenance, to communication and reuse, as part of the management process of information. HEIs are typically organisations that are hugely reliant on the management of information sources. The system should be robust and can be changed when new areas need to be added to system functionality. Students are reliant on the information contained in the system, as all facets of study are affected by this information which include student throughput or graduation which is reliant on OIM.

HEIs that have WIL as one of their teaching offerings have to consider it as a critical function to manage and facilitate the IM for WIL effectively. In the context of WIL, HEIs have to

manage this process based on information related to the three parties mentioned above and hereafter referred to as the 'triad partnership'. The triad partnership consists of the HEI representative, the industry partner and the student. Depending on the individual triad partner roles and responsibilities each partner has two levels of roles to play namely on the PIM and OIM levels. Considering the different responsibilities at both these levels and the boundaries that need to be spanned, it becomes clear that the information sharing activities of the triad partnership are complex. Because of this complexity the management of information is required to fully address the partners' expectations of WIL. Boundary-spanning is a complex concept that is relevant at personal and organisational levels.

3. BOUNDARY-SPANNING

The WIL process guides the triad partnership which requires well-managed information sources pertaining to the different functions and activities of IM for WIL. According to Burton and Thakur (2006, p. 80) boundary-spanning is an IM technique which dictates the roles and the functions of specific individuals who are responsible for communicating with external role players who are in communication with the organisation. Boundary-spanning is based on the principle that the triad partners are allocated specific functions and exchange information between the entities engaged in WIL, not only across institutional silos, but also across organisations. According to Draft (2010, p.150) boundary-spanning is concerned with the effective exchange of information.

Management of information in an organisational environment, be it on a PIM or OIM level is critical and needs to be managed in an accountable way while remaining sensitive to the needs and expectations of the triad partners. The multi-level structure is based on personal level interaction between the academic and administration triad partners. Mentioned triad

partners have specific and unique responsibilities and functions which have to be fulfilled. The HEI lecturer and HEI administrator have different functions and are appointed to provide services in line with these allocated responsibilities. The HEI lecturer, for example, is responsible for preparing the student for the work place; the HEI administrator is responsible for the placement of the students in industry. The boundary-spanning concept is a good practice concept which guides intricate relationship responsibilities. These responsibilities are part of the personal and organisational level collaboration. Relationships are multi-faceted based on the groups or individuals involved. The numbers of groups and individuals involved in this triad partnership have a complex nature which has to be founded on a well-developed strategy. Hargie (2011, p. 452) states that the number of groups and levels of interaction influences the complexity of the interrelationship between the partners.

According to Hargie (2011, p. 452) to determine the potential two-way relationship, the formula to chart the number of dyadic relationships (R) in a group as a factor of number of members (n), is as follows:

$$R = \frac{n(n - 1)}{2}$$

The complexity of information flow between triad partners is affected by the number of partners involved in the WIL process. To explain this trend a sample group from the Electrical Engineering Department at the UJ consists of the following triad partners on an academic and administration level. Two HEI lecturers, who are also responsible for acting as HEI administrators, 250 students from the same department and these students also act as 250 student administrators (responsible for administering their own studies). An average of four industry mentors (per industry) and 150 industry administrators (companies) make up the industry component of the triad partnership. The total members in the relationship consist of 1,254 members. The dyadic relationship calculation would then be $[1,254 \times 1,253] \div 2 = 785,631$

separate potential two-way relationships between members. This number reflects the massive increase in dyadic relationships when minimal numbers of individuals are added to the triad partnership.

The complexity of the dyadic relationships in the IM for WIL process increases with the number of triad partnership members involved in the process. The rationale of exposing the complexity of relationships based on the number of partners involved, impacts on the realisation that the information related to these relationships have to be well-managed. The management of these relationships is done on the IM for WIL principles, which requires serious planning, proper systems and well recorded system updates, of any activities that relate to WIL. The concept of boundary-spanning has to be put in place which allows for the building and maintenance of relationships that are necessary to support effective boundary-spanning (Beechler et al, 2009, p. 131). Boundary-spanning with the student and the industry serves two purposes for the HEI; they detect and process information about changes in the industry and they represent the HEIs interests to the industry. To determine the complexity of the seven faculties and 16 department within UJ a qualitative research design was used.

4. RESEARCH DESIGN

A qualitative research design was used because it aims to understand the phenomena in context-specific settings, such as a “real world setting, where the researcher does not attempt to manipulate the phenomenon of interest” (Patton, 2002, p. 39). According to Strauss and Corbin, (2008, p. 13) researchers who engage in a qualitative design do so because of the flexible, dynamic and evolving nature of qualitative research as opposed to the inflexible design used in quantitative research. Strauss and Corbin (2008, p. 12) further argue that by doing qualitative research the researchers will be allowed to experience the inner perspective

of the participants. They would also be able to determine how meanings are formed and discover rather than test variables. Phenomenological research emphasises the understanding of the “essence of a phenomenon as it is experienced by individuals” (Clark & Creswell, 2010, p. 239). According to Longhofer, Floersch and Hoy (2012, p. 40) phenomenology studies structures of conscious experience as experienced from the first-person’s point of view, along with relevant conditions of the experience. The data collected explores the involvement of the WIL coordinator/lecturer, industry mentor/liaison and student in the IM of the administration of the WIL process.

The WIL coordinator/lecturer and industry mentor/liaison from UJ at the seven identified UJ faculties and 16 academic departments involved in the IM for WIL were consulted. These academic departments are spread across various faculties involved namely; Electrical Engineering, Mechanical Engineering, Mining, Bio Technology, Food Technology, Analytical Chemistry, Architectural Technology, Clothing, Curriculum and Instruction, Public Relations and Communication, Tourism, Hospitality, Marketing, Radiography, Emergency Medical Care, and Environmental Health. The consultation sessions employed the method of semi-structured individual interviews. The students from UJ within the seven identified faculties in mentioned departments, were involved in group discussions that were done with the students per faculty. HEI lecturers and industry mentors involved in the IM for WIL were included in semi-structured individual interviews. Students from the identified departments involved in the WIL process took part in group interviews. The current variety of processes were investigated in the identified faculties and departments related to the WIL process. This comparative analysis allowed the identification of the good practices for WIL. Data collection enable a cross-cutting analysis aimed at streamlining the diverse processes at a HEI in the South African context. Marshall and Rossman (2011, p. 19) state that a

qualitative phenomenological approach typically involves several long, in-depth interviews with individuals who have experienced the phenomenon of interest, namely the current IM for WIL process within UJ.

5. FINDINGS OF THE CURRENT IM FOR WIL PROCESS WITHIN UJ

At present the UJ follows a decentralized approach for WIL. The reporting protocol starts with the Departmental WIL Coordinators that submit reports to Faculty WIL Coordinators for consolidation and feedback at the UJ WIL Forum. The purpose of this Forum is to provide a report on WIL at UJ and to maintain awareness of international and national developments. This WIL process was rolled out in 2011 by way of the WIL Forum, comprising of specific structures and responsibilities and the UJ WIL management strategy which was implemented in 2011. The WIL Forum Chair in turn reports to the Senate Teaching and Learning Committee (STLC).

The WIL Forum is populated by the six faculties that acknowledge and accept the WIL Forum namely Science, Health Science, Management, Humanities, and Engineering and the Built Environment. The only faculty that is conducting WIL at UJ, but is not part of this WIL Forum, is the Faculty of Education. The Faculty of Education places students at schools which is part of the Department of Higher Education and Training (DHET) process. The DHET is the national body representing departments responsible for Education and Training placements in terms of WIL at HEIs. WIL principles are applied with these placements, but as one interviewee explained: "it's funded [by the DHET and the Faculty of Education] doesn't want to get involved". Therefore the Faculty of Education places students at schools which address their need and responsibility in terms of WIL placements. The Faculty of Education directly engages with schools (industry) which is a unique relationship pertaining to placement of students, as part of a government structure.

The representatives on the UJ WIL Forum are the Executive Director of Academic Development and Support, the Head of the Unit for Quality Promotion, the UJ WIL Coordinator and the various faculty coordinators. The departmental coordinators report to the Faculty WIL Coordinators, who in turn give feedback to the UJ WIL Forum. The UJ WIL Coordinator briefs the Executive Director of the Division of Academic Development and Support on the status of the WIL process. The Executive Director of the Division of Academic Development and Support chairs the WIL Forum. The Executive Director is part of the STLC mentioned above and reports to the STLC on the status of WIL in UJ. It is important for the UJ WIL Coordinator to be aware of all matters related to WIL in UJ to ensure the different faculties' and departments' WIL information is available when needed.

The processes relating to IM for WIL at UJ are mainly done by the department coordinators. As shown in Fig. 1 below the HEI lecturer and HEI administrator/WIL coordinator for each of the 16 identified departments at UJ mentioned above, is at times the same person. The student (apply learning) and student administrator/WIL opportunity is always the same person. In the same way the industry liaison and industry mentor could be the same person or there could be quite a number more than one. The complexity of the dyadic relationships has been discussed under boundary-spanning under the complexity example of the Department of Engineering at UJ. In this example it shows 785,631 possible interactions in relationships for an average year with 250 students in one of the departments of the Faculty of Engineering and the Built Environment.

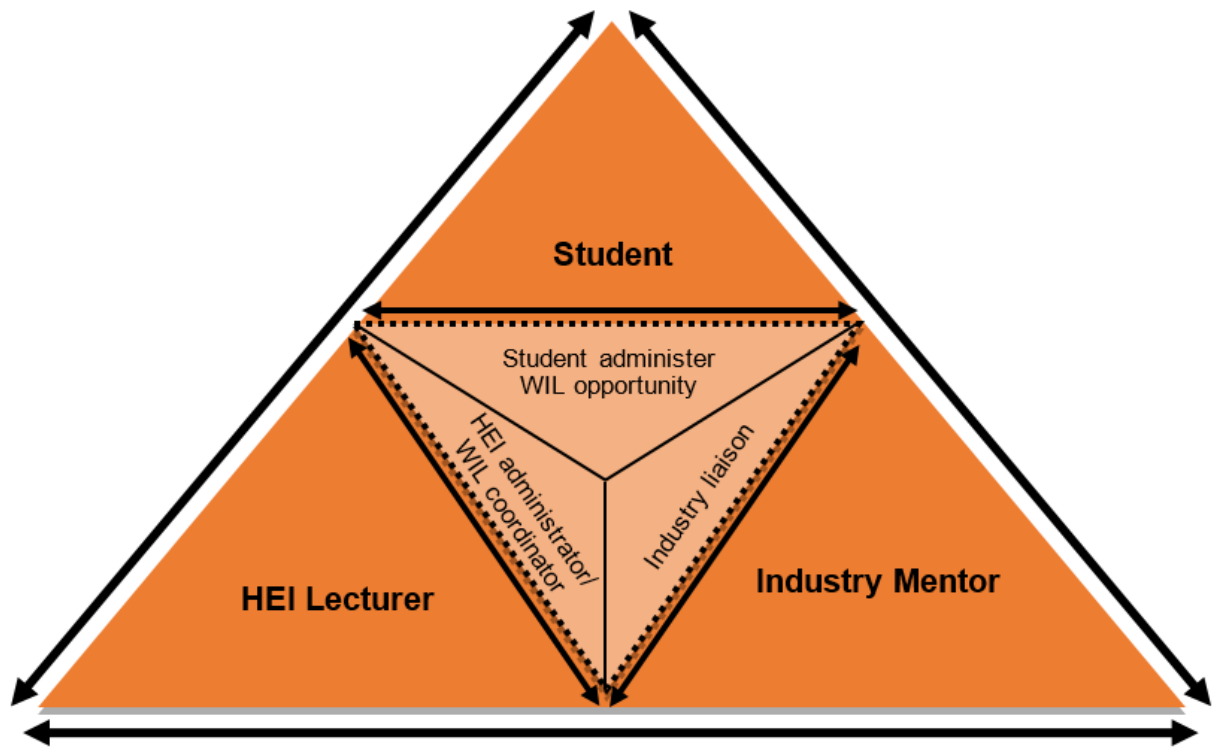


Fig. 1 Roles and responsibility of triad partnership (own source)

Each identified department at UJ was investigated and the differences and commonalities between the faculties and departments were identified. The next section reports the findings in terms of the differences between the departments followed by a discussion of the commonalities.

5.1. DIFFERENCES OF THE WIL APPLICATIONS WITHIN UJ

The first difference of WIL in the departments is the timeslot management in terms of when WIL is taking place. These placement periods vary depending on the period when students are engaged in studies to complete their qualifications. From the 16 investigated departments four of the departments are registering students for WIL during all the periods (years) of the department's qualification. Eight of the departments are only registering for WIL during the final year of the department's qualification. Two of the departments are registering for WIL during their second year of studies. One department is registering for WIL in the department's

first and second year of the qualification. Another department's registering for WIL takes place during their second and third year of their qualification. This varying timeslots and different approaches to WIL registration is complicated and makes the management of WIL challenging for the coordination of the IM for WIL system.

From the 16 departments mentioned only five departments' HEI administrators send out student CVs to industry liaisons for placement in terms of the WIL process. The students from the rest of the 11 departments send out their own CVs for placement and exposure to industry. Students of these departments do not receive any support, guidance or assistance from the HEI administrators in the application and placement process.

Eleven departments assess their students only by way of a logbook where the students need to complete certain tasks while doing their WIL component in the industry. This logbook is critical to record and provide proof of placement and progress corroborating placement and exposure at industry level, providing insight into work done at the company. The other five departments have different methods of assessing their students during the departments' WIL placement. These different methods of assessing the department's students are by way of an oral exam after completion of the departments' WIL placement, by way of a seminar where students are peer reviewed by other HEI lectures and students. Another way to assess students' working environment is by means of sessions of reflection with students once a week during a contact hour on campus during one of their subjects. Further assessments of students are done by requesting students to do simulations of what was done in the working environment during their WIL placement and verifying and quantifying the standard of exposure and what was achieved.

5.2. COMMONALITIES OF THE WIL APPLICATIONS WITHIN UJ

After analysis of the data from the semi structured interviews, group discussions and open-ended questions, the commonalities were identified at UJ which were similar to the two investigated USA universities (Brink et al. 2014). These commonalities identified are as follows:

Information

Information is critical to the WIL process, as all parties involved in WIL require some type of information. HEIs for example need to provide more feedback information to industry mentors and students during the WIL placement periods. This information is used to guide and advise partners on issues requiring attention or gaps developing during placement.

Registration

Registration of students is the key to WIL placement. The registration process contains critical information needed by all the triad partners involved in WIL such as CVs of the candidates and placement partners which are reliant on this information and contact details for purposes of contact and selection.

Placement preparation

This process consists of workshops where students receive a comprehensive briefing on their role, function and responsibilities during placement. Students cannot be placed at industry without being briefed about the requirements, safety and reporting processes as students have never been at industry level and need all the guidance which is available.

Interviewing for placement

Industry needs to interview students to determine their suitability for placement at the specific industry. Interviews are critical for industry partners to identify and place the

most appropriate and best suited candidate which will learn and add value to the capacity of industry placement as this student may eventually be placed at this industry.

□ **WIL experience**

Feedback sessions with students and discussions of logbooks content is undertaken to determine the extent of the experience gained. It is clear that placement in terms of WIL is not the end of it all and needs to be followed up and corroborated to ensure learning continues and evaluation is done to ensure sharing of skills to standard and that the student as well as the industry benefitted from this placement.

□ **Submission and site visit**

Site visits are an instrument used by the HEIs to verify the progress and experience of students on site and determine any gaps in the system as experienced by industry mentor. Students actually find these site visits critical to their progress and performance. Guidance is needed on any aspects or challenges requiring intervention at industry site as well as industry mentors need guidance on what is presented to student and if it is relevant and appropriate.

□ **Assessment**

Assessment is done of students during their WIL placement by using multiple platforms such as interviews, presentations and oral exams. Assessment is critical as the progress made and work done is not evaluated and followed up on which can verify progress and issues which affect placement standards and applicability.

□ **Feedback**

Feedback is a critical function which is needed by all parties in the relationship, such as an industry mentor, in order to see if information has been correctly provided by students. Students need feedback on their performance during WIL placement and

similarly the HEI representative needs feedback on the experience of students and industry mentors during placement.

After studying the differences and the commonalities of WIL applications by the various departments it became clear that the process of semi-structured individual interviews and group discussions were appropriate to secure relevant information on factors which impact negatively on the current UJ WIL model process. The triad partners namely the HEI lecturers, administrators, industry mentors and students are all part of the WIL process, being managed at the HEI. The following issues were identified as major factors which need attention:

- **Site visits by HEI lecturers:** Both students and industry partners expressed the need to have more site visits from HEI lecturers the number of students and industry site placements require the availability of more HEI lecturers. The current number of HEI lecturers available is not enough to conduct site visits. To visit sites of students at industry placement requires increased human capacity for this purpose. The expectation for the implementation of the WIL portal will alleviate administration workload and allow more focus on the importance of the educational component of WIL for HEI lecturers. This should allow site visit optimisation which is currently lacking due to the overburden of administration.
- **System access by all WIL partners:** With the current HEI Blackboard system applied, the industry partners do not have authorised access to contributing to the WIL process, for example, WIL assessments or access to students' online submitted CVs.
- **Communication feedback and guidance during placement:** Students and industry mentors communicated the need for continued feedback and guidance throughout the

WIL process, and specific HEI guidance is required on both mentioned partners' performance.

- **The logbook process is not reliable and needs to be revisited:** Industry mentors and students commented on the reliability of the logbook process and the request goes to HEI lecturers to develop and implement a more reliable measurement tool to evaluate student progress at industry level.
- **Enrichment of student at industry level during WIL placement:** HEI lecturers are requested to provide more guidance and advice on what has to be achieved by student at industry level and how these goals can be met by industry mentors.

Research was done on best practice models from international universities which have well-structured and successful working WIL programmes, where students are effectively placed and receive extensive industry placement. These programmes are so successful and in demand due to its benefit to students having an opportunity to be exposed to the working environment which enhances student opportunity for future placement. Based on these WIL models and the structuring thereof, a centralised model seems best suited to manage and improve the IM for WIL process. Through the application of the nominal group technique it was found the most prominent issue affecting the WIL process is the perception of non-commitment of UJ to WIL. However, there is no support for this stated commitment as the nominal group technique discussion participants are not experiencing any serious change taking place. If there were change it would have indicated increased commitment to the WIL process as no change or progress is experienced and the HEI. UJ as an institution therefore has to consider implementing measures to show commitment and realisation of an effective WIL process.

A centralised WIL unit, by means of an online WIL portal, will assist in releasing some of the workload of the HEI lecturers involved in the WIL process and then more site visits will materialise. From the nominal group discussion the HEI lecturers feel that a well-developed centralised unit will help with the following:

□ **Tracking facility**

An IM process requires information which can be used to select or share data that is critical to specific processes. The unavailability of such sources of information has a detrimental effect on the capacity of the system to provide the required results if the information generated is not available when such information has not been loaded on the system. All activities on the system have to be auditable to ensure full accountability and transparency should any queries develop and would need to be resolved using the system auditing functionality.

□ **Centralised training workshop**

Soft skills training for students are in some cases generic but training is often also department specific. The generic soft skills training such as CV writing and interviewing skills is very important for student WIL placement. In order to develop a practical WIL programme each department has to identify their unique needs for department specific workshops. The non-facilitation of these workshops (that is, workshops are not being held, or workshops that are poorly presented) is one of the main contributing factors keeping students from placement positions.

□ **Already use similar process on Blackboard thus WIL portal with industry access will be helpful**

The Blackboard system is functioning within UJ and is used to host student learning guides, storing student assignments and CVs. The industry is however not part of the

Blackboard platform and is excluded as the guidelines and protocol design was focused on creating a storage capacity archive for students' online projects and allow backup information. Students at times misplace or lose information due to computer failures or suffer virus infections on their equipment. In this regard the Blackboard system functions as back-up. However the Blackboard system does not allow for industry access to student information, more specifically, access to students' CVs. The proposed WIL portal will provide this functionality.

□ **Labor law issues compliance done by Centralise WIL Unit**

In developing the WIL portal attention should be given to the issue of sensitive information which includes personal information such as students' medical condition. Such Information has to be secure and confidential on the system. Strict rules apply and compliance issues have to be adhered to (for example, Protection of Personal Information Act). Critical compliance guidelines and policies need to be in place to formalise processes related to storage of personal information.

□ **Student orientation (CV/interviews)**

Student orientation has to be done in collaboration with each department's HEI lecturers responsible for the WIL process. The HEI lecturers promote the approach whereby industry are afforded the opportunity to interview potential students for placement on campus during a career fair planned and arranged by using the centralised WIL portal.

□ **Building relationship with UJ, industry and the Sector Education and Training Authorities**

The Sector Education and Training Authority (SETA) in South Africa is a professional skills training organisation. The participants in the nominal group technique discussion shared a strong feeling that the centralised WIL unit can strengthen and facilitate the

relationship between UJ, industry partners and the Sector Education and Training Authorities (SETAs).

□ **Assistance with administration process**

A WIL portal which can assist with reducing the administrative burden on HEI lecturers will be beneficial. If the system can be developed in a way which allows for enhanced administrative oversight it will promote WIL effectively and optimise WIL capacity rolling out the WIL portal. This will allow HEI lecturers more time to conduct site visits since this was identified as one of the most pressing aspects of the current WIL process.

□ **Centralised office that deals with placement**

Although this response is similar to the tracking facility response, it specifically refers to the administration of placements. The placement of students at industry is an administrative function which has to be facilitated using the centralised WIL portal. This centralise IM for WIL process can allow a centralised IM database and management system where all facets of WIL will be managed and controlled in an accountable way using a portal approach.

CONCLUSION

The need for a centralised well developed IM for WIL process and the construction of a WIL programme and what it should consist of, to be effective has been established with this research. The current WIL system in place is so diverse and fragmented that a well-designed and practical system needs to be designed and put in place to address these areas or gaps.

Research was conducted at two USA based universities and compared with UJ in South Africa to compare and evaluate systems and how the WIL process is rolled out and used.

These statements can be corroborated with research that was conducted using semi-structured individual interviews, group discussions and open ended questionnaires to secure credible information. As part of research to establish that WIL is critical to triad partners which are the same groups wherever in the world at a HEI. The students are the core; industry critical to placement, and of course the HEI which facilitates the WIL process and becomes part of sharing and enriching the WIL experience of students.

The benefits of an effective IM for WIL process are diverse and have various points of impact, such as industry placement for students. Students learn at industry level and apply academic knowledge to practical industry environments. Industry secures access to the brightest young minds and can evolve and challenge these students in sourcing fresh inputs and insights in aged processes and programmes. HEI representatives have the opportunity to interact with industry more and secure inputs on the standard of academic training as well as ensure the optimal deployment of students to industry.

The limitations of this study was that it was only conducted based on the inputs from two USA based universities and the UJ. The study is not a worldwide study but the focus was on securing information from international universities which had been engaged in developing WIL systems for an extended period and comparing this information with one South African based university. The UJ was used as it was within researchers' functioning environment and allowed for extensive inputs having access to all areas of WIL departments' processes and functions.

This study being a case study based project, it has a pertinent relevance to the targeted HEI. Any other HEI would have to investigate the IM for WIL process from their perspective in terms of the unique processes in place at the specific organisation. A further study has to be done to investigate the voluntary option of WIL as part of qualifications within HEIs.

The overall focus is influencing the HEI fraternity of the critical and strategic importance of a fully functioning IM for WIL portal, where all facets of WIL are managed and recorded facilitating a new insight and approach to WIL by academic institutions. A centralised WIL unit in HEIs should improve the IM for WIL processes based on research already conducted on well-functioning WIL programs at international universities. The benefits of having a centralised WIL unit have been discussed extensively and need to be part of a new approach to the development of a WIL portal. Eventually the portal will form the gateway services provided by the IM for WIL feedback system allowing functions such as uploads and enquiries related to WIL information that are generated by the centralised IM for WIL model principles. Marie Curie's quote from Reilly (2006:41) cannot be more relevant as to the establishment of a centralised WIL unit in the stating, to achieve progress in IM for WIL, the process will neither be swift, not easy, but most definitely worthwhile.

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